



Compliance Division

# Advisory

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## Abrasive Blasting

Number 18

March 3, 1995

### ABRASIVE BLASTING PROGRAM APPLICATION FOR CERTIFIED ABRASIVE

The California Air Resources Board (CARB) Compliance Division is currently accepting applications for certification of abrasive for permissible outdoor blasting. The purpose of the abrasive certification program is to restrict the abrasive selected for permissible dry outdoor blasting operations in order to reduce the generation of fine particles, which are inhalable and contribute to reduced visibility.

The deadline for receipt of abrasive for certification testing in 1995 is April 15, 1995. Each grade of the abrasive you wish to have certified for permissible outdoor blasting must be submitted separately. Also, if you produce an abrasive at more than one site a sample from each site must be submitted separately.

Please complete and return the enclosed application form for all abrasive you wish to submit for certification this year. Be sure you read the instructions carefully before you fill out the application. Products submitted incorrectly will not be tested.

In order to be certified, the abrasive, before blasting, must contain not more than one percent, by weight, materials passing a #70 U.S. Standard sieve. After blasting the abrasive must contain not more than 1.8 percent, by weight, material 5 microns or smaller. The producer or manufacturer of an abrasive which fails the sieve test may choose to demonstrate that the abrasive meets a 20 percent opacity emission limit when blasted. The after-blast criteria must be met in either case. A copy of the regulations and a flow chart of the certification process are enclosed.

If you wish to have your distributors listed with your certification, you will need to provide a written request that each distributor be listed. The distributor will also need to request in writing that they be listed as distributors for your product.

An invoice for the cost of the test will be sent to you at the completion of the certification testing. Your results will be sent to you upon payment of the invoice. Nonpayment of the invoice will result in decertification.

If you have any questions, please contact Ms. Kathryn Gugeler at (916) 327-1521 All correspondence should be addressed to Mr. James J. Morgester at the post office box below.

Enclosure

James J. Morgester, Chief  
Compliance Division  
California Air Resources Board  
Post Office Box 2815, Sacramento, CA 95812

**CALIFORNIA AIR RESOURCES BOARD**  
**Compliance Division**

**Application for Certification of Abrasives  
for Permissible Dry Outdoor Blasting**

**A.** This application must be filled out completely. Please note that the Plant Location must be sufficient to find the facility. An address is ideal.

**B.** Send completed application and a Material Safety Data Sheet (MSDS) for each sample to:

Kathryn M. Gugeler  
California Air Resources Board  
Compliance Division  
P.O. Box 2815  
Sacramento, California 95812 USA

If you have any questions, please call Kathryn Gugeler at (916) 327-1521

**C.** Shipping Instructions:

Ship a minimum 200 lb. sample of each grade of abrasive in five (5) gallon plastic shipping buckets with lids. The contents of each shipping bucket must not weigh more than 40 lbs. Each plastic shipping bucket must be labeled on the outside with the following:

- Company Name and address
2. Abrasive name
3. Plant location.

The above information must also be inserted with the sample inside of each bucket.

**Important: SHIP ONLY IN 5 GALLON PLASTIC SHIPPING BUCKETS WITH LIDS.  
NO OTHER TYPES OF CONTAINERS WILL BE ACCEPTED.**

**Important: MATERIAL MUST BE SHIPPED POSTAGE-PAID.  
COD SHIPMENTS WILL NOT BE ACCEPTED.**

**Important: DAMAGED OR BROKEN CONTAINERS WILL NOT BE TESTED.**

**Ship containers to:**

Department of Transportation  
Attention: Bob Page  
5900 Folsom Blvd.  
Sacramento, California 95819 USA

**D.** At the completion of the abrasive certification testing, you will be billed for the cost of your testing. You will be sent your results upon payment of your invoice.

**CALIFORNIA AIR RESOURCES BOARD**  
**Compliance Division**

**Application for Certification of Abrasives  
for Permissible Dry Outdoor Blasting**

Read instructions on first page before filling out this application

**Certification to be issued to:**

\_\_\_\_\_  
*(Business license name of organization to receive certification and Fed ID #)*

\_\_\_\_\_  
*(Name(s) of owner or principle partners doing business as above)*

**Contact Person:** *(Print if different than above)*

**Mailing Address:**

\_\_\_\_\_  
**Abrasive description for certification:** *(Use another sheet if more space is necessary)*

<i>Manufacturer's or Trade Name</i>	<i>Brand Name and/or Grade</i>	<i>Plant Location</i>	<i>Abrasive Type</i>
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<i>Manufacturer's or Trade Name</i>	<i>Brand Name and/or Grade</i>	<i>Plant Location</i>	<i>Abrasive Type</i>
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<i>Manufacturer's or Trade Name</i>	<i>Brand Name and/or Grade</i>	<i>Plant Location</i>	<i>Abrasive Type</i>
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<i>Manufacturer's or Trade Name</i>	<i>Brand Name and/or Grade</i>	<i>Plant Location</i>	<i>Abrasive Type</i>
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**Do you desire the results of the testing to be held confidential?**      **Yes**      **No**

**Signature of Responsible Person:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Type or print name:** \_\_\_\_\_

_____ <i>(Telephone Number)</i>	_____ <i>(FAX Number)</i>	_____ <i>(Date)</i>
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**CALIFORNIA AIR RESOURCES BOARD**  
**Compliance Division**

**Application for Certification of Abrasives**  
**for Permissible Dry Outdoor Blasting**

**Product Composition Declaration**

There are no differences between the products named below, except their name. The products named below are all the same chemically and physically, are the same grade, and were mined/produced at the same location using the same processes. These products are all represented by the sample of the product indicated below.

I hereby certify under penalty of perjury that this statement is true and correct.

**Signature of Responsible Person:** \_\_\_\_\_

**Print Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Sample Submitted for:**

\_\_\_\_\_  
*Print Manufacturer's or Trade Name and Brand Name and/or Grade on Sample Submitted*

**Other identical Products to be Listed as Certified:**

*List each additional Manufacturer's or Trade Name and/or Grade to be listed for the Product Submitted*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CALIFORNIA CODE OF REGULATIONS**

**TITLE 17**

**AIR RESOURCES BOARD**

**ABRASIVE BLASTING REGULATIONS**

**June 1, 1991**

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## **SUBCHAPTER 6. ABRASIVE BLASTING**

### **Article 1. General Provisions**

#### **92000 Definitions.**

For the purposes of this subchapter:

(a) "Abrasives" means any material used in abrasive blasting operations including but not limited to sand, slag, steel shot, garnet, or walnut shells.

(b) "Abrasive blasting" means the operation of cleaning or preparing a surface by forcibly propelling a stream of abrasive material against the surface.

(c) "Abrasive blasting equipment" means any equipment utilized in abrasive blasting operations.

(d) "Air contaminant" includes smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids, or any combination thereof.

(e) "Certified abrasive" means an abrasive which has been certified by the Air Resources Board (ARB) in accordance with Section 92530.

(f) "Cut-point for fineness" means the smallest United States standard sieve size through which no more than one percent by weight of abrasive material will pass before blasting when tested in accordance with California Test Method No. 202-G, dated July 1, 1982.

(g) "Hydroblasting" means any abrasive blasting using high pressure liquid as the propelling force.

(h) "Multiple nozzles" means more than one nozzle being used to abrasive blast the same surface in such close proximity that their separate plumes are indistinguishable.

(i) "Permanent building" means a building which is used, in whole or in part, for sandblasting operations.

(j) "Person" means any individual, firm, association, organization, partnership, business trust, corporation, company, contractor, supplier, installer, user or owner, or any State or local governmental agency or public district or any officer or employee thereof. "Person" also means the United States Government or its agencies to the extent authorized by federal law.

(k)

(1) "Source" means the impact surface from any single abrasive blasting nozzle.

(m) "Steel or iron shot/grit" means abrasives which meet either the Society of Automotive Engineers (SAE) recommended practices J827 and J444 or Steel Founders' Society of America Standards 21-68 or 20T-66, as those practices and standards existed on 2-24-84.

(n) "Sweep abrasive blasting" means a method of cleanup performed in order to achieve surface uniformity or impurity removal after wet blasting, hydroblasting, or vacuum blasting operations.

(o) "Vacuum blasting" means any abrasive blasting in which the spent abrasive, surface material, and dust are immediately collected by a vacuum device.

(p) "Wet abrasive blasting" means any abrasive blasting using compressed air as the propelling force, which in the judgment of the air pollution control officer uses an amount of water adequate to minimize the plume to comply with the requirements of Section 92200.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

#### **92100. Scope and Policy**

These standards in this subchapter are not intended to prohibit air pollution control districts from enforcing their permit regulations as they apply to abrasive blasting equipment.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

#### **Article 2 Prohibitions**

#### **92200. Visible Emission Standards.**

(a) No person shall discharge into the atmosphere from any abrasive blasting which is conducted outside a permanent building any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(1) As dark or darker in shade as that designated as No 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

(2) Of such opacity as to obscure an observer's view to degree equal to or greater than does smoke described in subdivision (a)(1).

(b) No person shall discharge into the atmosphere from any abrasive blasting which is conducted within any permanent building any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(1) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

(2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subdivision (b)(1).

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

#### 92210. Nuisance Prohibition.

Compliance with all rules and regulations in this subchapter does not exempt any person from complying with Section 41700 of the Health and Safety Code, nor from complying with any State statutory or common law nuisance prohibition.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

#### 92220. Compliance with Performance Standards.

No person shall conduct any abrasive blasting operation without complying with the performance standards described in Article 4.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

### Article 3. Source Evaluation

#### 92400. Visible Emission Evaluation Techniques.

Visible emission evaluation of abrasive blasting operations shall be conducted in accordance with the following provisions:

(a) Emissions shall be read in opacities and recorded in percentages.

(b) The light source should be at the rear of observer during daylight hours.

(c) The light source should be behind the emission during hours of darkness.

(d) Observer position should be at approximately right angles to wind direction, and at a distance no less than twice the height of the source but not more than one quarter of a mile from the base of the source.

(e) Emissions from blasting which is conducted outside a permanent building shall be read at a point in the emissions which is (1) twenty-five feet from the source; or (2) at the densest point of the emission after a major portion of the spent abrasive has fallen out, whichever is greater; provided, however, that emissions may be read at a greater distance than either (1) or (2), if the observer reasonably determines that the greater distance will not significantly affect the reading.

(f) Where an owner or operator demonstrates that the presence of uncombined water is the only reason for a failure to meet the limitations of Section 92200, that section shall not apply.

(g) Emissions from blasting which is conducted outside a permanent building and which employs multiple nozzles shall be judged as a single source unless it can be demonstrated by the owner or operator that each nozzle, evaluated separately, meets the emission and performance standards provided for in this subchapter. The owner or operator shall be offered the opportunity to make such a demonstration.

(h) Emissions from blasting which is conducted within a permanent building shall be read at the densest point after the air contaminant leaves the building.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

### Article 4. Performance Standards

#### 92500. General Provisions.

(a) Except as provided in subdivision (b), all abrasive blasting operations shall be conducted within a permanent building.

(b) An abrasive blasting operation conducted under one or more of the following conditions is not required to be conducted within a permanent building:

(1) Steel or iron shot/grit is used exclusively;

(2) The item to be blasted exceeds 8 feet in any dimension; or



(3) The surface being blasted is situated at its permanent location or no further away from its permanent location than is necessary to allow the surface to be blasted.

(c) Except for testing conducted in accordance with Section 92530 (b)(1)(B) and as otherwise provided in Sections 92510 or 92520, any abrasive blasting operation conducted in accordance with subsections (b)(2) and (b)(3) outside a permanent building must use exclusively:

- (1) Wet abrasive blasting;
- (2) Hydroblasting;
- (3) Vacuum blasting; or
- (4) Abrasives certified for permissible dry outdoor blasting.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

Surface preparation for raised traffic delineating markers and pavement (marking removal using abrasive blasting shall comply with at least one of the following performance standards:

(a) Wet abrasive blasting, hydroblasting, or vacuum blasting shall be used;

(b) Dry abrasive blasting for removal or surface preparation for immediate application of pavement markings of less than 1,000 square feet or for surface preparation for raised traffic delineating markers shall use certified abrasives.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

#### 92520 Stucco and Concrete.

Abrasive blasting of stucco and concrete shall be performed by wet blasting, hydroblasting, or vacuum blasting with the following exceptions:

Dry blasting with a certified abrasive may be used for:

- (a) Window and door returns and frames;
- (b) Eaves, overhangs, and ceilings;

(c) Sweep abrasive blasting except for stucco surfaces;

(d) Completely shrouded structures or blast areas that effectively control emissions;

(e) Abrasive cleaning operations, other than aggregate exposure or paint removal related to new concrete construction or repair activity, if such operations are performed onsite.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

#### 92530. Certified Abrasives.

(a) The ARB shall certify abrasives which comply with the performance standards set forth in subdivision (b) below. Any person who desires certification of an abrasive shall furnish to the ARB an adequate test sample, together with fees to defray the cost of testing. Each certification of an abrasive shall include the ARB's determination of the original cut-point for fineness of the abrasive. The ARB shall maintain an up-to-date list of certified abrasives. Certification shall not be effective for more than two years. Abrasive materials which are certified on the effective date of this section shall remain certified until September 1, 1992.

#### (b) Performance Standards.

(1) (A) Before blasting the abrasive shall not contain more than one percent by weight material passing a #70 U.S. Standard sieve when tested in accordance with "Method of Test for Abrasive Media Evaluation," Test Method No. California 371-A, dated May 15, 1975.

(B) If the abrasive does not meet the requirements of subdivision (b)(1)(A), the person who desires certification of the abrasive may as an alternative demonstrate within the State of California to the satisfaction of the ARB that the abrasive meets a 20 percent opacity emission limit when tested in accordance with the "Visible Emission Evaluation Test Method for Selected Abrasives Used in Permissible Dry Outdoor Blasting," as adopted by the ARB on November 8, 1990 and incorporated herein by reference. The person who desires certification of the abrasive shall be solely responsible for conducting the demonstration.

(2) After blasting, the abrasive shall not contain more than 1.8 percent by weight material 5 microns or smaller when tested in accordance with "Method of Test for Abrasive Media Evaluation," Test Method No. California 371-A, dated May 15, 1975.

(c) A used certified abrasive shall not be considered certified for reuse unless the abrasive conforms to its original cut-point for fineness.

(d) A blend of certified abrasives shall be considered certified for purposes of Section 92630(a), unless found not to meet the requirements of Section 92630(b) pursuant to testing initiated by the ARB.

(e) All manufacturers and suppliers of certified abrasives shall legibly and permanently label the invoice, bill of lading and abrasive packaging or container with each of the following:

(1) The manufacturer's name or identification trade name;

(2) The grade, weight proportion of components in abrasive blends, brand name of the abrasive or brand names and grades of components of abrasive blends; and

(3) The statement "ARB certified for permissible dry outdoor blasting." This subsection shall become effective six months after November 8, 1990.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 41900, 41902, 41904, and 41905, Health and Safety Code.

**Abrasive Certification**  
**Single Product Flowchart**  
**Test Method No. California 371-A**

